

Application No. 10/775,521
Amendment dated November 6, 2006
Reply to Final Office Action of September 6, 2006

Amendments To the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1 Claim 1 (currently amended): A switch coupled between a plurality of host units and a device
2 for communicating therebetween and comprising:

3 a) a first serial advanced technology attachment (ATA) port coupled to a first host
4 unit and including a first host task file, said first port for causing access, to the
5 device, by the first host unit, the first host task file responsive to commands sent
6 by the first host unit;

7 b) a second serial ATA port coupled to a second host unit and including a second
8 host task file, said second port for causing access to the device, by the second host
9 unit, the second host task file responsive to commands sent by the second host
10 unit;

11 c) a third parallel ATA port, coupled to a device, for causing access to the device, by
12 the first or second host units; and

13 d) an arbitration and control circuit, coupled to the first, second and third ports, for
14 selecting one of the first host or second host units to concurrently access the
15 device, through the switch, by accepting commands, from either of the first or
16 second host units, at any given time, including when the device is not in an idle
17 state.

1 Claim 2 (canceled).

1 Claim 3 (canceled).

1 Claim 4 (currently amended): A switch as recited in claim [3] 1 wherein said third parallel
2 ATA port includes a device task file.

1 Claim 5 (original): A switch as recited in claim 4 wherein said first, second and third ports
2 are level 4 ports.

1 Claim 6 (original): A switch as recited in claim 1 wherein said device is a storage unit.

1 Claim 7 (original): A switch as recited in claim 1 wherein said switch is employed in an
2 enterprise system.

1 Claim 8 (original): A switch as recited in claim 1 wherein said arbitration and control
2 circuit causes concurrent access of the device by the first and second host units.

1 Claim 9 (original): A switch as recited in claim 1 wherein information, in the form of data,
2 commands or setup, is transferred from the device to the first or second host units
3 through the switch and the information is modified by the switch prior to being
4 received by the first or second host units such that modified information rather than
5 the information is received by the first or second host units.

1 Claim 10 (original): A switch as recited in claim 9 wherein the information is referred to as
2 'identity drive response'.

1 Claim 11 (original): A switch as recited in claim 9 wherein the information is referred to as
2 'Tag.

1 Claim 12 (original): A switch as recited in claim 1 wherein information, in the form of data,
2 commands or setup, is transferred from the first or second host units to the device
3 through the switch and the information is modified by the switch prior to being
4 received by the device such that modified information rather than the information is
5 received by the device.

1 Claim 13 (original): A switch as recited in claim 12 wherein the information is referred to
2 as 'Tag'.

1 Claim 14 (original): A switch as recited in claim 13 wherein the arbitration and control
2 circuit include a Tag/Sactive Mapping Circuit for mapping a host tag to a device tag
3 and inverse mapping for identifying a host.

1 Claim 15 (original): A switch as recited in claim 1 wherein either the first or the second
2 host sends a legacy queue command queued by the device.

1 Claim 16 (original): A switch as recited in claim 1 wherein either the first or the second
2 host sends a native queue command for execution thereof by the device.

1 Claim 17 (original): A switch as recited in claim 1 wherein the first, second and third ports
2 are level 3 ports and a Data frame information system (FIS) first-in-first-out (FIFO)
3 and an associated FIFO Control are coupled to the first, second and third ports and
4 located external thereto.

1 Claim 18 (currently amended): A switch comprising:

- 2 a. a first serial advanced technology attachment (ATA) port for connection to a
3 first host unit, the first port including a first host task file responsive to
4 commands sent by the first host unit;
- 5 b. a second serial ATA port for connection to a second host unit, the second port
6 including a second host task file responsive to commands sent by the second
7 host unit;
- 8 c. a third parallel ATA port for connection to a device; and
9 an arbitration and control circuit, coupled to the first, second and third ports, for
10 selecting either the first host unit or the second host unit to concurrently access the
11 device, through the switch, by accepting commands, from either of the first or second
12 host units, at any given time, including when the device is not in an idle state.

1 Claim 19 (original): A switch as recited in claim 18 wherein the switch is a serial ATA
2 switch.

1 Claim 20 (original): A switch as recited in claim 18 wherein said first serial ATA port
2 includes a first host task file.

1 Claim 21 (original): A switch as recited in claim 20 wherein said second serial ATA port
2 includes a second host task file.

1 Claim 22 (original): A switch as recited in claim 21 wherein said third parallel ATA port
2 includes a device task file.

1 Claim 23 (original): A switch as recited in claim 18 wherein said device is a storage unit.

1 Claim 24 (original): A switch as recited in claim 18 wherein said switch is employed in an
2 enterprise system.

1 Claim 25 (original): A switch as recited in claim 18 wherein said arbitration circuit causes
2 concurrent access of the device by the first and second host units.

1 Claim 26 (original): A switch as recited in claim 18 wherein information, in the form of
2 data, commands or setup, is transferred from the device to the first or second host
3 units through the switch and the information is modified by the switch prior to being
4 received by the first or second host units such that modified information rather than
5 the information is received by the first or second host units.

1 Claim 27 (original): A switch as recited in claim 26 wherein the information is referred to
2 as 'identity drive response'.

1 Claim 28 (original): A switch as recited in claim 26 wherein the information is referred to
2 as 'Tag'.

1 Claim 29 (original): A switch as recited in claim 18 wherein information, in the form of
2 data, commands or setup, is transferred from the first or second host units to the
3 device through the switch and the information is modified by the switch prior to being
4 received by the device such that modified information rather than the information is
5 received by the device.

1 Claim 30 (original): A switch as recited in claim 28 wherein the information is referred to
2 as 'Tag'.

1 Claim 31 (currently amended): A switch that is connectable to a first host unit, a second host
2 unit and a device via serial advanced technology attachment (ATA) links, said switch
3 comprising:

- 4 a. a first serial ATA port for connection to a first host unit, the first port
5 including a first host task file responsive to commands sent by the first host
6 unit;

7 b. a second serial ATA port for connection to a second host unit, the second port
8 including a second host task file responsive to commands sent by the second
9 host unit;

10 c. a third parallel ATA port for connection to a device;

11 d. an arbitration and control circuit, coupled to the first, second and third ports,
12 for selecting one of the first or second host units to concurrently access the device
13 through the switch, by accepting commands, from either of the first or second host
14 units, at any given time, including when the device is not in an idle state.

1 Claim 32 (original): A switch as recited in claim 31 wherein the switch is a serial ATA
2 switch.

1 Claim 33 (original): A switch as recited in claim 31 wherein said first serial ATA port
2 includes a first host task file.

1 Claim 34 (original): A switch as recited in claim 33 wherein said second serial ATA port
2 includes a second host task file.

1 Claim 35 (original): A switch as recited in claim 34 wherein said third parallel ATA port
2 includes a device task file.

1 Claim 36 (original): A switch as recited in claim 31 wherein said device is a storage unit.

1 Claim 37 (original): A switch as recited in claim 31 wherein said switch is employed in an
2 enterprise system.

1 Claim 38 (original): A switch as recited in claim 31 wherein said arbitration and control
2 circuit causes concurrent access of the device by the first and second host units.

1 Claim 39 (original): A switch as recited in claim 31 wherein information, in the form of
2 data, commands or setup, is transferred from the device to the first or second host
3 units through the switch and the information is modified by the switch prior to being

4 received by the first or second host units such that modified information rather than
5 the information is received by the first or second host units.

1 Claim 40 (original): A switch as recited in claim 39 wherein the information is referred to
2 as 'identity drive response'.

1 Claim 41 (original): A switch as recited in claim 39 wherein the information is referred to
2 as 'Tag'.

1 Claim 42 (original): A switch as recited in claim 31 wherein information, in the form of
2 data, commands or setup, is transferred from the first or second host units to the
3 device through the switch and the information is modified by the switch prior to being
4 received by the device such that modified information rather than the information is
5 received by the device.

1 Claim 43 (original): A switch as recited in claim 42 wherein the information is referred to
2 as 'Tag'.